

FORM PTO-1390 REV. 5-93		US DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEYS DOCKET NUMBER P99,1248
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371			U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 09/341207
INTERNATIONAL APPLICATION NO. PCT/DE98/00380	INTERNATIONAL FILING DATE 11 FEBRUARY 1998	PRIORITY DATE CLAIMED 13 FEBRUARY 1997	
TITLE OF INVENTION METHOD FOR GENERATING A GROUP OF PAGE FILES FORMATTED IN A PAGE MARKUP LANGUAGE			
APPLICANT(S) FOR DO/EO/US FRIEDBERT CRUSIUS			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
1. <input checked="" type="checkbox"/>	This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.		
2. <input type="checkbox"/>	This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.		
3. <input checked="" type="checkbox"/>	This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay.		
4. <input checked="" type="checkbox"/>	A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.		
5. <input checked="" type="checkbox"/>	A copy of International Application as filed (35 U.S.C. 371(c)(2)) - drawings attached.		
	a. <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).		
	b. <input type="checkbox"/> has been transmitted by the International Bureau.		
	c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US)		
6. <input checked="" type="checkbox"/>	A translation of the International Application into English (35 U.S.C. 371(c)(2)) - drawings attached.		
7. <input type="checkbox"/>	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. §371(c)(3))		
	a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).		
	b. <input type="checkbox"/> have been transmitted by the International Bureau.		
	c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.		
	d. <input type="checkbox"/> have not been made and will not be made.		
8. <input type="checkbox"/>	A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).		
9. <input checked="" type="checkbox"/>	An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).		
10. <input type="checkbox"/>	A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).		
Items 11. to 16. below concern other document(s) or information included:			
11. <input checked="" type="checkbox"/>	An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98; (PTO 1449, Prior Art, Search Report).		
12. <input checked="" type="checkbox"/>	An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. 3.28 and 3.31 is included. (SEE ATTACHED ENVELOPE)		
13. <input checked="" type="checkbox"/>	A FIRST preliminary amendment.		
	<input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.		
14. <input type="checkbox"/>	A substitute specification.		
15. <input type="checkbox"/>	A change of power of attorney and/or address letter.		
16. <input checked="" type="checkbox"/>	Other items or information:		
	a. <input checked="" type="checkbox"/> Submission of Drawings - 4 sheets of drawings, FIGS. 1-4.		
	b. <input checked="" type="checkbox"/> EXPRESS MAIL #EL095777954US dated July 7, 1999.		

60 Rec'd PCT/PTO 07 JUL 1999

U.S. APPLICATION NO. (if known) see 37 C.F.R. 1.5) **09/341207**

INTERNATIONAL APPLICATION NO
PCT/DE98/00380

ATTORNEY'S DOCKET NUMBER
P99,1248

17. ☒ The following fees are submitted:

BASIC NATIONAL FEE (37 C.F.R. 1.492(a)(1)-(5):

Search Report has been prepared by the EPO or JPO \$840.00

International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) .. \$670.00

No international preliminary examination fee paid to USPTO (37 C.F.R. 1.482) but international search fee paid to USPTO (37 C.F.R. 1.445(a)(2)) \$760.00

Neither international preliminary examination fee (37 C.F.R. 1.482) nor international search fee (37 C.F.R. 1.445(a)(2)) paid to USPTO \$970.00

International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) \$ 96.00

ENTER APPROPRIATE BASIC FEE AMOUNT =

CALCULATIONS

PTO USE ONLY

\$ 840.00

Surcharge of \$130.00 for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 C.F.R. 1.492(e)).

\$

Claims

Number Filed

Number Extra

Rate

Total Claims

10 - 20 =

0

X \$ 18.00

\$

Independent Claims

01 - 3 =

0

X \$ 78.00

\$

Multiple Dependent Claims

\$260.00 +

\$

TOTAL OF ABOVE CALCULATIONS =

\$ 840.00

Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 C.F.R. 1.9, 1.27, 1.28)

\$

SUBTOTAL =

\$ 840.00

Processing fee of \$130.00 for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(f)).

\$

+

TOTAL NATIONAL FEE =

\$ 840.00

Fee for recording the enclosed assignment (37 C.F.R. 1.21(h). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). \$40.00 per property

+

TOTAL FEES ENCLOSED =

\$ 840.00

Amount to be refunded

\$

charged

\$

a. ☒ A check in the amount of \$ 840.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 08-2290. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 C.F.R. 1.494 or 1.495 has not been met, a petition to revive (37 C.F.R. 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Hill & Simpson
A Professional Corporation
85th Floor Sears Tower
Chicago, Illinois 60606

SIGNATURE

John R. Garrett

NAME

SCANNED 4

- 1 -

BOX PCT

IN THE UNITED STATES ELECTED OFFICE
OF THE UNITED STATES PATENT AND TRADEMARK OFFICE
UNDER THE PATENT COOPERATION TREATY-CHAPTER II

5

PRELIMINARY AMENDMENT

APPLICANT(S): Friedbert Crusius DOCKET NO: P99,1248
SERIAL NO: GROUP ART UNIT:
 EXAMINER:

10

INTERNATIONAL APPLICATION NO: PCT/DE98/00380

INTERNATIONAL FILING DATE: 11 February 1998

INVENTION: **METHOD FOR GENERATING A GROUP OF
PAGE FILES FORMATTED IN A PAGE
MARKUP LANGUAGE**

15

Assistant Commissioner for Patents,
Washington, D.C. 20231

Sir:

Please amend the above-identified application as follows before
calculation of the U.S. national fee under 35 U.S.C. 371 (c) (1).

IN THE SPECIFICATION:

20

At the top of each page please delete "GR 97 P 1176".

At the top of page 1, please delete "Foreign version".

On page 1, please delete lines 1-5 and insert the following:

--S P E C I F I C A T I O N**TITLE**

25

**METHOD FOR GENERATING A GROUP OF PAGE FILES
FORMATTED IN A PAGE MARKUP LANGUAGE**

BACKGROUND OF THE INVENTION--.

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At the top of page 2, please insert the following heading:

--SUMMARY OF THE INVENTION--

On page 2, please delete lines 7-8 and insert the following paragraphs:

5 --In general terms the present invention is a method for generating a group of page files formatted in a page markup language, for storage in a data server device of a data networking system through which the page files can be addressed by a multiplicity of data processing (DP) user systems and can be transferred to them.

10 A data record-structured author file is drawn up on a DP authoring system which can be connected to the data server device via a data transmission line. Author file text and graphic information can be edited within a respective data record and reference information can be added about data records of data record-structured files which can be addressed in the data processing authoring system. The author file is sent to a format generator device of the DP authoring system. An associated page file is in each case generated into the page markup language (HTML) from the data records of the author file and from the data records which belong to the data record-structured files and are marked by reference information. A page markup language-specific link control address addressing the page file associated with the marked data record is generated in each case from reference information added to the data records and is stored in the page file associated with the data record containing the reference information. The page files generated in this way and provided with page markup language-specific link control addresses are transmitted to the data server device via the data transmission line.

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Advantageous developments of the present invention are as follows.

Reference information about other data records of data record-structured files which can be addressed in the DP authoring system can be added to data records of the data record-structured files which can be addressed in the DP authoring system.

Reference information about other data records of the data record-structured author file can be added to data records of the data record-structured author file.

The author file is a data record-structured file which can already be addressed in the DP authoring system.

An item of reference information about files structured free of data records which can be addressed in the DP authoring system can be added.

The information stored in data record-structured files is subdivided into information modules to which at least one individual structure address is assigned. Each information module is stored together with its individual structure address in a respective data record. An item of reference information about a data record of a reference file is added in that, by means of visualization of the structure addresses filed in the reference file, it is possible to make a selection of one of the structure addresses.

When selecting a data record already stored in the data server device as a page file, a page markup language-specific link control address addressing this page file is generated and is temporarily stored in a data field of the data record holding the reference information.

The structure address is an item of text information or an item of numerical information.

5 A data record-structured file in the DP authoring system can be addressed only if the page files assigned to its data records are already stored in the data server device. A page file is transmitted only if it is not yet stored or a change has been made to its information content, in particular of link control addresses.

10 The stored page files are displayed in the DP user systems with navigation control fields which allow leafing through the group of page files to the logically next or preceding page file while avoiding activation of corresponding forward functions of a page access device.--.

On page 2, please delete lines 25-29, and insert the following heading and paragraph:

--BRIEF DESCRIPTION OF THE DRAWINGS

15 The features of the present invention which are believed to be novel, are set forth with particularity in the appended claims. The invention, together with further objects and advantages, may best be understood by reference to the following description taken in conjunction with the accompanying drawings, in the several Figures of which like reference numerals identify like elements, and in which:--.

20 On page 2, line 32, after "device" please insert --;--.

On page 3, line 3, after "device" please insert --;--.

On page 3, line 5, after "author file" please insert --; and--.

On page 3, in line 9, please insert --**DESCRIPTION OF THE PREFERRED EMBODIMENTS--**.

25 On page 11, after line 18, please insert the following paragraph:

--The invention is not limited to the particular details of the method depicted and other modifications and applications are contemplated. Certain other changes may be made in the above described method without

departing from the true spirit and scope of the invention herein involved. It is intended, therefore, that the subject matter in the above depiction shall be interpreted as illustrative and not in a limiting sense.--.

IN THE CLAIMS:

5 On page 12, line 1, please change "Patent Claims" to
--WHAT IS CLAIMED IS:--.

Please amend claims 1-10 as follows.

1. **(Amended)** A method for generating a group of page files formatted in a page markup language [(HTML)], for storage in a data server device [(server)] of a data networking system [(Internet/Intranet)] through which the page files are addressable [can be addressed] by a multiplicity of [DP] data processing user systems [(DV1,..,DVn)] and are transferrable [can be transferred] to [them,] the user systems, comprising the steps of:
- 10 [-] drawing up a data record-structured author file [being drawn] up on
15 a data processing [DP] authoring system [(AUTS)] which is connectable [can be connected] to the data server device [(server)] via a data transmission line [(DL)], in which author file text and graphic information [can be edited] is editable within a respective data record and reference information [(title)] about data records of
- 20 data record-structured files which [can be addressed] is addressable in the DP authoring system is addable; [(AUTS) can be added,] sending the author file [being sent] to a format generator device [(HTML-GEN)] of the [DP] authoring system [(AUTS)], by which [an associated] a respective page file is [in each case] generated in the
- 25 page markup language [(HTML)] from the data records of the author

file and from the data records which belong to the data record-structured files and are marked by reference information [(title)], a respective page markup language-specific link control address [(HTML link)] addressing the page file associated with the marked data record being generated [in each case] from reference information [(title)] added to the data records and being stored in the page file associated with the data record containing the reference information [(title),];

[-] transmitting the generated page files [generated in this way and] that provided with page markup language-specific link control addresses [(HTML link) being transmitted], to the data server device [(server)] via the data transmission line [(DL)].

2. **(Amended)** The method as claimed in claim 1, wherein reference information [(title)] about other data records of data record-structured files which is addressable [can be addressed] in the [DP] authoring system [(AUTS) can be added] is addable to data records of the data record-structured files which [can be addressed] are addressable in the [DP] authoring system [(AUTS)].

3. **(Amended)** The method as claimed in claim 1 [or 2], wherein reference information [(title)] about other data records of the data record-structured author file is addable [can be added] to data records of the data record-structured author file.

4. **(Amended)** The method as claimed in claim 1 [one of the preceding claims], wherein the author file is a data record-structured file which [can] is already [be] addressed in the [DP] authoring system [(AUTS)].

5. **(Amended)** The method as claimed in claim 1 [one of the preceding claims], wherein an item of reference information [(title)] about files structured free of data records which is addressable [can be addressed] in the [DP] authoring system is addable [(AUTS) can be added].

6. **(Amended)** The method as claimed in claim 1 [one of the preceding claims], wherein the information stored in data record-structured files is subdivided into information modules to which at least one individual structure address is assigned, wherein each information module is stored together with its individual structure address in a respective data record, and wherein an item of reference information about a data record of a reference file is added in that, by [means of] visualization of the structure addresses filed in the reference file, [it is possible to make a selection of] one of the structure addresses is selectable.

7. **(Amended)** The method as claimed in claim 1 [one of the preceding claims], wherein when selecting a data record already stored in the data server device as a page file, a page markup language-specific link control address [(HTML link)] addressing this page file is generated and is temporarily stored in a data field of the data record holding the reference information [(title)].

8. (Amended) The method as claimed in claim 1 [one of the preceding claims], wherein the structure address is one of an item of text information [(title)] or an item of numerical information [(index)].

5 9. (Amended) The method as claimed in claim 1 [one of the preceding claims], wherein a data record-structured file in the [DP] authoring system is addressable [(AUTS) can be addressed] only if the page files assigned to [its] data records thereof are already stored in the data server device [(server)], and wherein a page file is transmitted only if it is not yet stored or a change has been made to [its] information content thereof, in
10 particular of link control addresses [(HTML link)].

10. (Amended) The method as claimed in claim 1 [one of the preceding claims], wherein the stored page files [(SD1,..,SDm)] are displayed in the [DP] user systems [(DV1,..,DVn)] with navigation control fields which allow leafing through a [the] group of page files to [the] a logically next or
15 preceding page file while avoiding activation of corresponding forward functions of a page access device [(browser)].

IN THE ABSTRACT

On page 15, please delete lines 1-4 and insert the following heading:

--ABSTRACT OF THE DISCLOSURE--.

20 On page 15, line 14, please delete "Figure 2".

REMARKS

The claims have been amended to place them in proper U.S. form.
No new matter is added by the foregoing amendments.

5 Applicant respectfully requests entry of the above preliminary
amendments prior to calculation of the filing fees.

Respectfully submitted,



(Reg.No. 27,888)

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Attorneys for Applicant

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BOX PCT

IN THE UNITED STATES ELECTED OFFICE
OF THE UNITED STATES PATENT AND TRADEMARK OFFICE
UNDER THE PATENT COOPERATION TREATY-CHAPTER II

5 APPLICANT(S): Friedbert Crusius DOCKET NO: P99,1248
SERIAL NO: GROUP ART UNIT:
EXAMINER:

INTERNATIONAL APPLICATION NO: PCT/DE98/00380

INTERNATIONAL FILING DATE: 11 February 1998

10 INVENTION: **METHOD FOR GENERATING A GROUP OF
PAGE FILES FORMATTED IN A PAGE
MARKUP LANGUAGE**


Assistant Commissioner for Patents,
Washington, D.C. 20231

15 **SUBMISSION OF PROPOSED DRAWING ADDITIONS**

Enclosed are copies of the drawings, (Figures 1-4), showing in red,
the addition of labels to the elements depicted in Figures 1 and 2. Approval
of the additions is respectfully requested.

Respectfully submitted

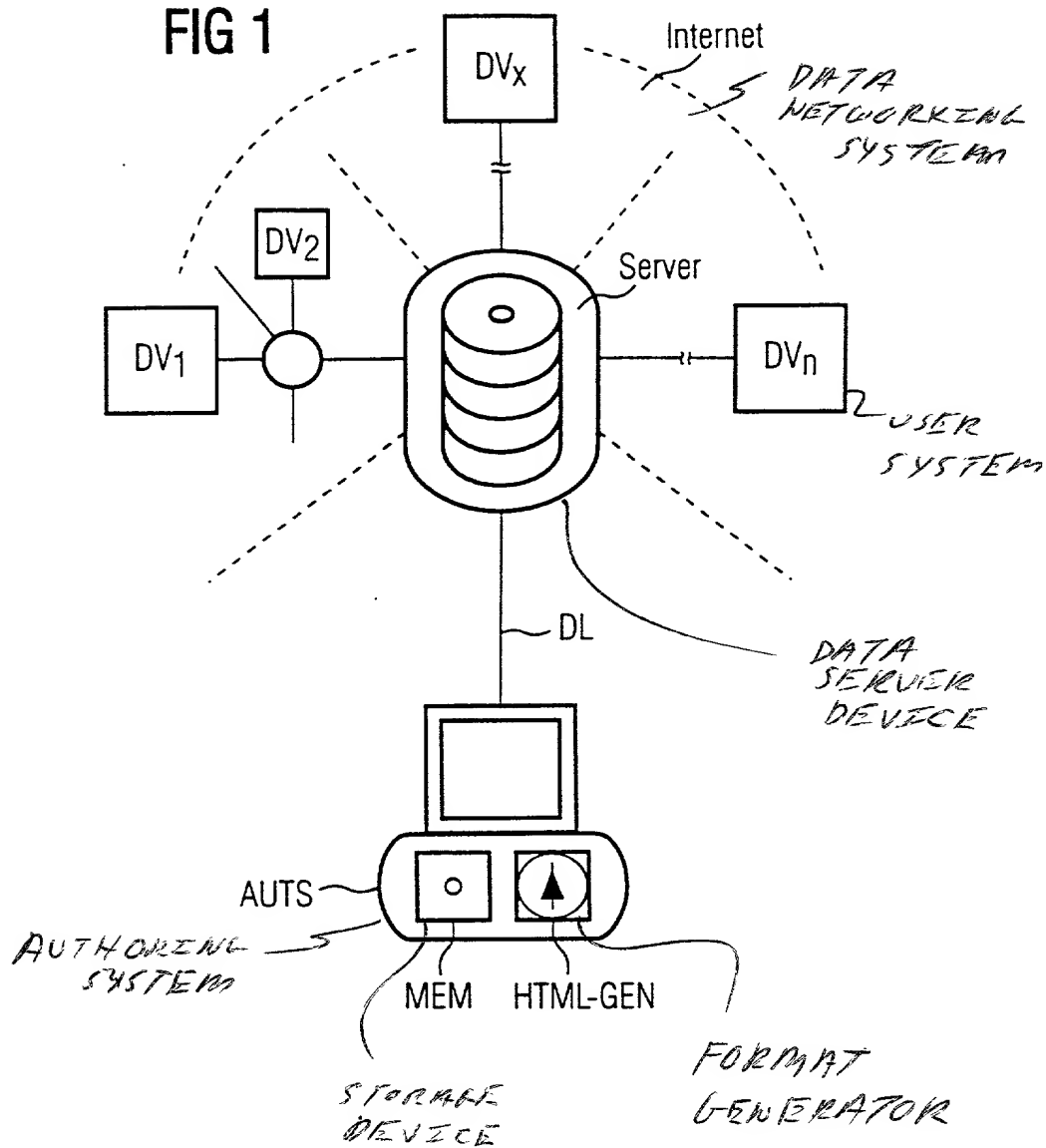
20


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FIG 1



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FIG 2

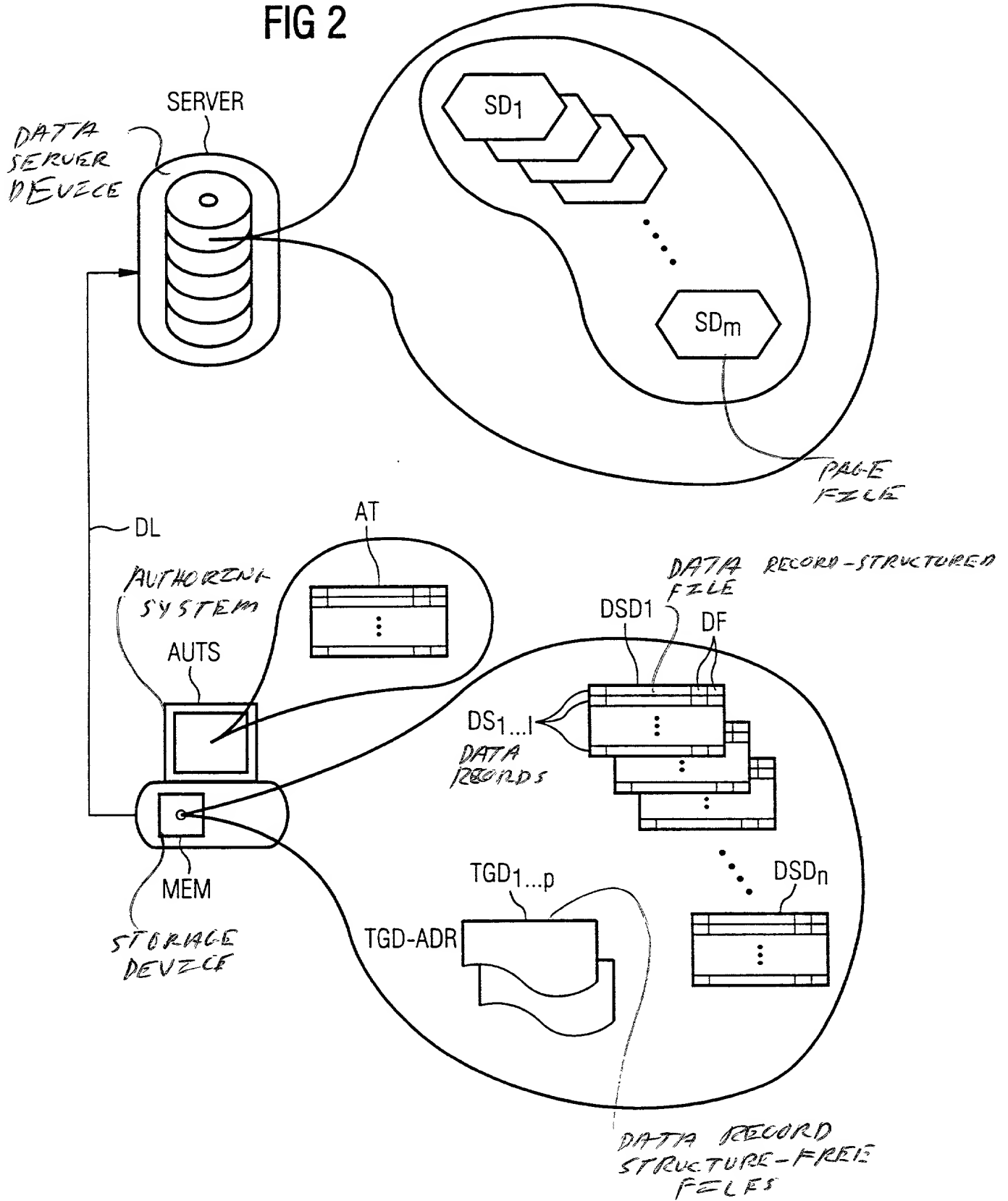
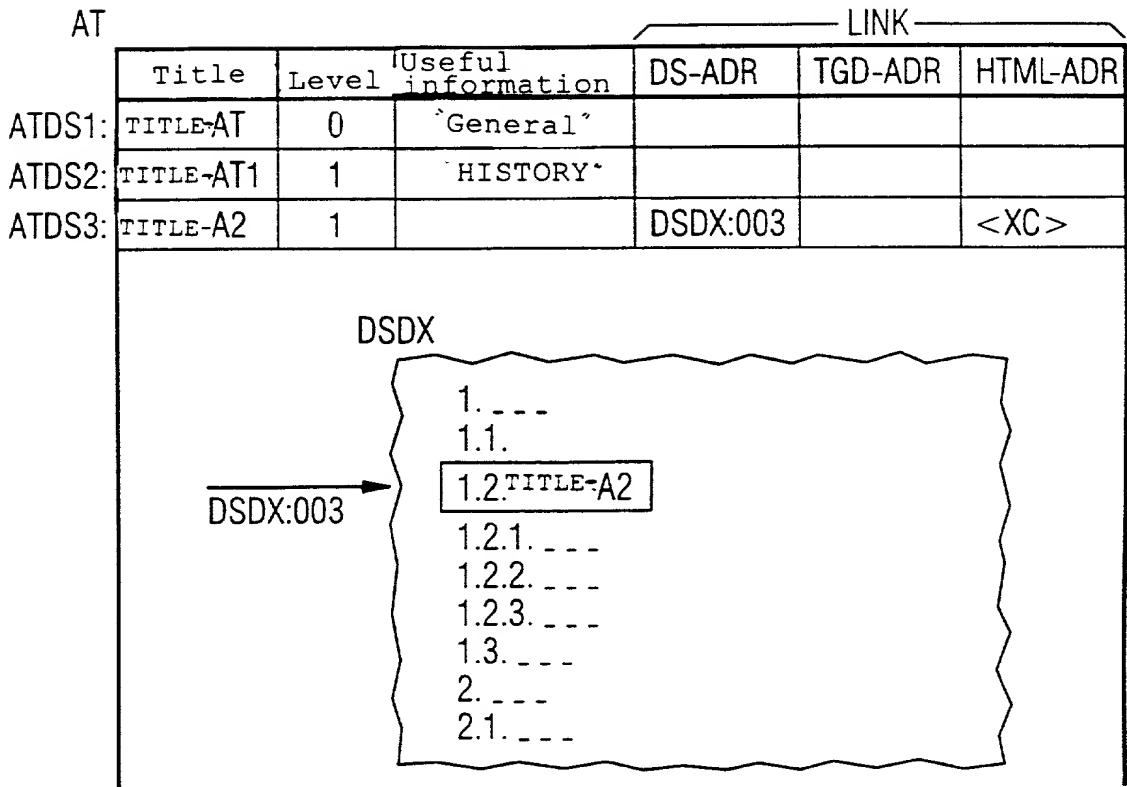


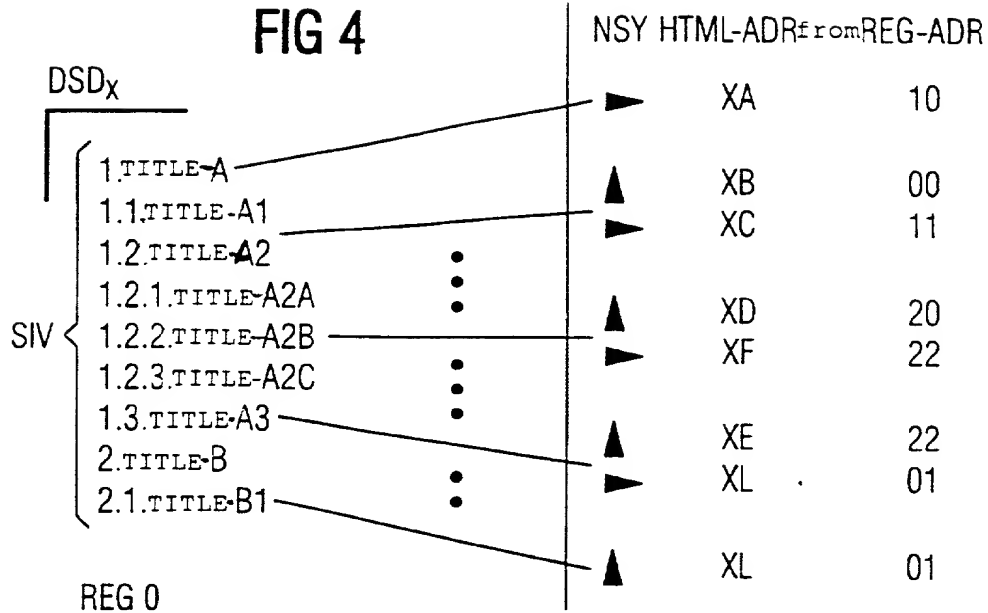
FIG 3



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FIG 4



	TITLE	INDEX	DS-ADR	HTML-ADR	log. next REG-ADR	log. Prev. REG-ADR
00:	TITLE-A	1.	< >	<XB>	10	—
01:	TITLE-B	2.	< >	<XL>	13	12

REG 1

10:	TITLE-A1	1.1.	< >	<XA>	11	00
11:	TITLE-A2	1.2.	< >	<XC>	20	10
12:	TITLE-A3	1.3.	< >	< >	01	22
13:	TITLE-B1	2.1.	< >	< >	—	01

REG 2

20:	TITLE-A2A	1.2.1.	< >	<XD>	21	11
21:	TITLE-A2B	1.2.2.	< >	<XF>	22	20
22:	TITLE-A2C	1.2.3.	< >	<XE>	12	21

Description

Method for generating a group of page files formatted
in a page markup language

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The drawing up as well as the maintaining and availability of information, in particular of information relating to system processes and their illustration and logging, are gaining increasing importance primarily in the field of industry. In the scope of so-called management systems with which all product-related processes and structures in a plant or organization unit are defined, it is necessary to be able to make changes in existing processes, in their sequencing in their structuring as well as in control systems and subject descriptions in the most uncomplicated possible way, and to make the changed or freshly drawn up paperwork available as a document for all co-workers.

It is generally regarded as advantageous in this context if, when a new document is being drawn up, it is possible to resort to existing documentation or parts thereof. For example, documentation describing generally applicable regulations, defining standardized procedures or procedures specific to operating systems, or containing a similar representations which have already been drawn up, may be or need to be contained in a new document.

In order to meet these requirements and in order, in particular, to make changed or newly drawn up documents available to the relevant individuals as quickly as possible, information collation and storage supported by data processing techniques as well as data transmission via a private, for example in-house data network have been proposed.

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The object of the present invention is to provide a method with whose aid a structured document can be drawn up from existing documentation and made available to the greatest possible number of individuals while placing little demand on the data network and requiring little storage capacity.

This object is achieved according to the invention by the features of patent claim 1.

One essential advantage of the present invention, amongst others, consists in the physical separation of the original data drawn up by the author from the recovered data made available to the user via the data networking system. This means, in particular, that the original data cannot be overwritten by a user. The method according to the invention also allows optimum control over access rights between author and user.

Another advantage of the method according to the invention can be found in that, through the decoupling of original data and recovered data, the format generator device acts as a coupling component which makes it possible to use different hardware platforms as a basis and provides substantial independence from particular hardware characteristics.

Advantageous refinements of the invention are given in the subclaims.

An illustrative embodiment of the invention will be explained in more detail below with reference to the drawing, in which:

30

Figure 1 shows a schematic representation of a data networking system with a data server device

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Figure 2 shows a symbolic representation of files stored in an authoring system and in a server device

5 Figure 3 shows relevant data fields for drawing up an author file

Figure 4 shows a register drawn up by a format generator device for a file, in particular to determine navigation control addresses.

10 Figure 1 gives a greatly simplified symbolic representation of a data networking system INTERNET. A multiplicity of DP user systems DV1,...DVn can be connected directly, or with the interconnection of other data networking systems, to a data server device
15 SERVER; likewise, a DP authoring system AUTS is connected via a data transmission line DL to the data server device SERVER. The Internet/Intranet system used worldwide is employed as the data networking system.

In the data server device SEVER, a great deal
20 of documentation is stored, each item being divided into so-called pages. Documentation stored in the data server device SERVER can be addressed by all DP user systems DV1,...,DVn linked to it through, i.e. connected up to, the data networking system INTERNET.

25 To view documented information on the DP user systems DV1,...,DVn, page access devices, so-called browsers, are required on the latter which perform interpretation of control instructions contained in the pages and deliver - in accordance with the control
30 instructions - the useful content to a display device of the DP user system. The pages are drawn up in a page markup language, e.g. the known web language HTML, whose formatting options essentially indicate what status a subset of information within a respective page

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has. The page markup language also makes it possible, with the aid of a so-called tag put in a page, to indicate links (i.e. addresses) to other pages of the documentation.

5 The DP authoring system AUTS which, like the individual DP user systems DV1,...,DVn, is formed by a personal computer contains - as essential components for the present invention - a storage device MEM and a format generator device HTML-GEN technically embodied
10 at the programming level.

For the DP authoring system AUTS, a so-called "Home page" has been filed in the data server device SERVER, which serves as a point of reference for all documentation coming from the DP authoring system AUTS
15 and is used by the DP user systems DV1,...,DVn as an entry address for access to the documentation drawn up by the DP authoring system AUTS.

Conventionally, the "Home page" links to a list of contents in which the individual documentation or their lists of contents are indicated. On each of the
20 DP user systems DV1,...,DVn, with the aid of a conventional browser, it is possible to turn over via the list of contents from one page to the next or to a different page, which moreover requires relatively long waiting times and through which the networking system
25 becomes heavily loaded.

More detailed information about the Internet/Intranet, the web language HTML, about browsers and other devices known in connection with the
30 data networking system "Internet" can be found in the relevant literature, e.g. Russ Jones, Adrian Nye, "HTML und das World Wide Web" [HTML and the Worldwide Web], O'Reilly & Associates, Bonn, 1995.

In Figure 2, the data server device SERVER with
35 its storage medium and the DP authoring system AUTS with its storage

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device MEM are symbolically represented. Page files SD1,...,Sdm which are stored in HTML format in the storage medium of the data server device SERVER are also illustrated. Likewise symbolically represented are data record-structured files DSD1,...,DSDn which are stored in the storage device MEM. Each of the data record-structured files consists of a multiplicity of data records DS1,...,DSl which, for their part, are subdivided into data fields DF. The data record-structured files DSD1,...,DSDn are also to be regarded as databases or database modules. As well as these data record-structured files, data record structure-free files TGD1,...,TGDp which are not data record-structured or have a data record structure which differs from the chosen structure of the data record-structured files DSD1,...,DSDn are also stored in the storage device MEM. In particular, the data record structure-free files TGD1,...,TGDp may contain purely verbal and/or graphical documentation.

The figure also symbolically represents a data record-structured author file AT whose structure corresponds to that of the data record-structured files DSD1,...,DSDn. The author file AT is drawn up on the DP authoring system AUTS and is, of course, also stored, in particular temporarily stored, in the storage device MEM.

For each data record DS1,...,DSl of the data record-structured files DSD1,...,DSDn, there is, in the storage medium of the data server device SERVER, an associated page which will be referred to below as page files SD1,...,Sdm. In the DP authoring system AUTS, it is possible to gain read and write access to each data record DS1,...,DSl with the aid of an individual data record address DS-ADR which identifies the data record file and, in the latter, the relevant data record. The page files SD1,...,Sdm have an individual HTML address HTML-ADR under which they can, in the data networking system or in

the data server device SERVER, be addressed, i.e. found.

Figure 3 illustrates the way in which an author file AT is drawn up on the DP authoring system AUTS with the aid of data records and data fields of the author file AT. In particular, each of the data record-structured files DSD1,...,DSDn can be treated as an author file AT.

In the construction of documentation to be drawn up in the author file AT, a new data record is to be provided and, correspondingly, to be reserved for each chapter of the documentation, that is to say for each title and subtitle. The data records DS are subdivided into a multiplicity of data fields DF of which during construction a few are visible, e.g. the data field "TITLE" and the data field "USEFUL INFORMATION", but most are not visible to the creator.

In the present illustrative embodiment, when drawing up the documentation, the title of the first chapter was entered manually by the creator in the first data record - with the data record address ATDS1 which the user moreover does not see. Further, useful information belonging to this title was entered by the creator using the keyboard in the form of an item of text or graphic information "General" within the same data record.

The title of the next subchapter as well as associated useful information "History" were also entered by the creator using the keyboard. The data record Ds filled in this way has the data record address ATDS2.

The creator receives the title of the second subchapter from a list of contents of the data record-structured file DSDx, which list he gets displayed by selecting the data record-structured file DSDx in a "window" on the screen of the DP authoring system AUTS. Through corresponding

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marking of the desired chapter - as indicated in the figure by ringing the Chapter 1.2. - and after subsequent confirmation, the marked title is received, i.e. copied into the new data record with address
5 ATDS3. Further - the creator cannot see this - the data record address DS-ADR of the marked chapter and the HTML address HTML-ADR of the data page SD, which is assigned to the data record with the address DSDx:003, is stored.

10 Through the above-explained taking of a title from one of the data record-structured files DSD1,...,DSDn, the subchapters of the selected chapter are also implicitly taken into the documentation firstly to be drawn up or to be processed.

15 Moreover, instead of an explicitly entered item of useful information, a link address to a text or graphic file, e.g. one of the data record structure-free files TGD1,...,TGDp may be put in. Further, already existing chapters within the author file AT may also be
20 taken to other locations in the author file AT in the manner explained. In addition, a (direct) address of a data record structure-free file TGD may also be received, although a reference is not provided in this.

After the desired documentation has been
25 prepared by the creator through manual entry and by referencing to already existing chapters, at least within a preliminary context, the author file AT is fed to the format generator device HTML-GEN. By the latter, starting with the first data record, that is to say at
30 the data record address ATDS1 of the author file AT, a structured list of contents (cf. top of Figure 4) is drawn up and those data records which are not yet in HTML format (in the following example the first two data records of the author file AT) are converted into
35 this format. Further, a copy of the HTML page files generated is transmitted via the data transmission line DL to the data server device SERVER

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for storage there. The author file AT which has been drawn up is stored as a new data record-structured file DSDn+1 in the storage device MEM of the DP authoring system.

5 Figure 4 illustrates the drawing up of a list of contents, as was prepared by the format generator device HTML-GEN in the case of a data record-structured file, e.g. DSDx, which was drawn up beforehand.

10 Available for the user to see is a list of contents, drawn up by the format generator device HTML-GEN, with index and title indications (at the upper left of the figure), the index being a multi-position index in order to be able to express a desired structuring level of the classification of the
15 documentation. Into this visible list of contents, are also all the subchapters of a chapter which [lacuna] been integrated, that is to say taken, by referencing - as explained in conjunction with Figure 3 regarding Chapter 1.2.

20 What the creator cannot see is the construction of register data records REG0,...,REG2 which, in particular, log a logical sequence of page files SD1,...,SDm belonging to a piece of documentation. This is intended, in particular, so that when displaying a
25 particular page file SDy on a DP user system Dvx on navigation symbols NSY [lacuna] can be presented and activated by the viewer on their DP user system in order to make it possible to turn over (leaf through) to the logical next or previous page within the
30 structure of the documentation. The navigation symbols NSY are intended in particular to allow the viewer on a DP user system to call up the next or previous page file in logical sequence, without needing not to activate the browser function which - as already
35 mentioned in the introduction - accesses a page through the list of contents.

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As navigation symbols NSY, a right arrow is indicated, which symbolizes turning over to the logically next page, and an up arrow is indicated, which symbolizes turning back to the previous page. The HTML address of the logically next page in the documentation and the HTML address of the logically preceding page are respectively stored associated with the navigation symbols NSY of a particular page.

For rapid determination of the logically next or preceding page address of a particular page, the register data records RG0,...,RG2 are drawn up by the format generator device HTML-GEN. The first register data record RG0 has two records, in which the titles of the hierarchically top level (level 0), that is to say the main titles of the documentation in question, are stored. The register data record RG1 similarly contains the titles of the chapters located at the next highest hierarchical level (level 1), and the register data record REG2 contains the titles of the hierarchical level 2.

In addition to a data field for the title, the register data records REG0,...,REG2 have other data fields, e.g. for the index allocated to the title, for the data record address DS-ADR of the data record DS belonging to the title in the DP authoring system AUTS and for the HTML address under which the page file SDy belonging to the title in question can be addressed.

In another first data field - if appropriate - the address of the register record in which the logically next title is stored is indicated. In another second data field - if appropriate - the address of the register record in which the logically preceding title is stored is indicated. The addresses indicated are thus used as a link to data records of the register data records RG0,...,RG2.

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On the basis of the hierarchical structure, indicated by way of example, of the list of contents SIV represented in the upper left-hand part of Figure 4, and therefore of the documentation, the first chapter has the title "TITLE-A". The page file SDy assigned to this logically first data record of the data record-structured file DSDx is likewise the logically first page file of the documentation and can be addressed under the HTML address XB. The next title in logical sequence belongs to Chapter 1.1. and, because of the lower hierarchical level, is stored in the register data record RG1 (under address 10). The page file SD belonging to this title (Title-A1) can be reached under the HTML address XA.

The next chapter in logical sequence in the documentation carries the title "Title-A2" and has the Index 1.2. The title is thus, because it has the same hierarchical level as the one before it, stored in the register data record REG1 (under the address 11). The following title in logical sequence "Title-A2A" is put under the address 20 in the register data record REG2 (for the hierarchical level 2). The page file SD belonging to this title (Title-A2A) can be addressed under the HTML address XD. The next title in logical sequence can in turn be found in the same register data record REG2 under the address 21 (TITLE-A2B). The previous title in logical sequence (relative to title "TITLE-A2A") is to be found in the register data record REG1 under the address 11. If the register data records REG0,...,REG2 are constructed in the same way, then the navigation symbols NSY with the corresponding HTML addresses for the logically subsequent or logically preceding page file, respectively, can be determined very quickly and straightforwardly and given to the page file SD in question. The HTML addresses of the logically subsequent and preceding page files are thus entered in the page in question and then sent as a component of it to the data server device SERVER.

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In the present example, only one navigation symbol NSY for turning over to the logically next page file, whose HTML address is XA, is put in the page with the HTML address XB. There is no navigation symbol to the preceding page because the chapter represents the start of the documentation. In the page file SD with the HTML address XA, the HTML address XC is stored under the navigation symbol NSY to the subsequent page, and the HTML address XB to the preceding page. In order to avoid transmission of page files which are already stored in the data server device SERVER, but whose HTML addresses have been changed to address a logically next or preceding page file SD, the register data records REG0,...,REG2 may be stored in the data server device SERVER, the HTML address of the logically next and preceding page files with respect to a page file in question being determined through a link from the register data records REG0,...,REG2.

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Patent Claims

1. A method for generating a group of page files formatted in a page markup language (HTML), for storage in a data server device (server) of a data networking system (Internet/Intranet) through which the page files can be addressed by a multiplicity of DP user systems (DV1,...,DVn) and can be transferred to them,
- a data record-structured author file being drawn up on a DP authoring system (AUTS) which can be connected to the data server device (server) via a data transmission line (DL), in which author file text and graphic information can be edited within a respective data record and reference information (title) about data records of data record-structured files which can be addressed in the DP authoring system (AUTS) can be added,
 - the author file being sent to a format generator device (HTML-GEN) of the DP authoring system (AUTS), by which an associated page file is in each case generated in the page markup language (HTML) from the data records of the author file and from the data records which belong to the data record-structured files and are marked by reference information (title), a page markup language-specific link control address (HTML link) addressing the page file associated with the marked data record being generated in each case from reference information (title) added to the data records and being stored in the page file associated with the data record containing the reference information (title),
 - the page files generated in this way and provided with page markup language-specific link control addresses (HTML link) being transmitted to the data server device (server) via the data transmission line (DL).
2. The method as claimed in claim 1,

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wherein reference information (title) about other data records of data record-structured files which can be addressed in the DP authoring system (AUTS) can be added to data records of the data record-structured files which can be addressed in the DP authoring system (AUTS).

3. The method as claimed in claim 1 or 2, wherein reference information (title) about other data records of the data record-structured author file can be added to data records of the data record-structured author file.

4. The method as claimed in one of the preceding claims, wherein the author file is a data record-structured file which can already be addressed in the DP authoring system (AUTS).

5. The method as claimed in one of the preceding claims, wherein an item of reference information (title) about files structured free of data records which can be addressed in the DP authoring system (AUTS) can be added.

6. The method as claimed in one of the preceding claims, wherein the information stored in data record-structured files is subdivided into information modules to which at least one individual structure address is assigned, wherein each information module is stored together with its individual structure address in a respective data record, and wherein an item of reference information about a data record of a reference file is added in that, by means of visualization of the structure addresses filed in the reference file, it is possible to make a selection of one of the structure addresses.

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7. The method as claimed in one of the preceding claims, wherein when selecting a data record already stored in the data server device as a page file, a page markup language-specific link control address (HTML link) addressing this page file is generated and is temporarily stored in a data field of the data record holding the reference information (title).

8. The method as claimed in one of the preceding claims, wherein the structure address is an item of text information (title) or an item of numerical information (index).

9. The method as claimed in one of the preceding claims, wherein a data record-structured file in the DP authoring system (AUTS) can be addressed only if the page files assigned to its data records are already stored in the data server device (server), and wherein a page file is transmitted only if it is not yet stored or a change has been made to its information content, in particular of link control addresses (HTML link).

10. The method as claimed in one of the preceding claims, wherein the stored page files (SD1,...,SDm) are displayed in the DP user systems (DV1,...,DVn) with navigation control fields which allow leafing through the group of page files to the logically next or preceding page file while avoiding activation of corresponding forward functions of a page access device (browser).

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Abstract

Method for generating a group of page files formatted
in a page markup language

5

When drawing up a hierarchically structured
document in an author file AT, a reference to a data
record of a file already stored in the authoring system
can be generated. The author file is sub-classified
10 into individual data records which are respectively
stored as pages on an Internet server. The added
reference is converted into an HTML page address.

Figure 2

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FIG 1

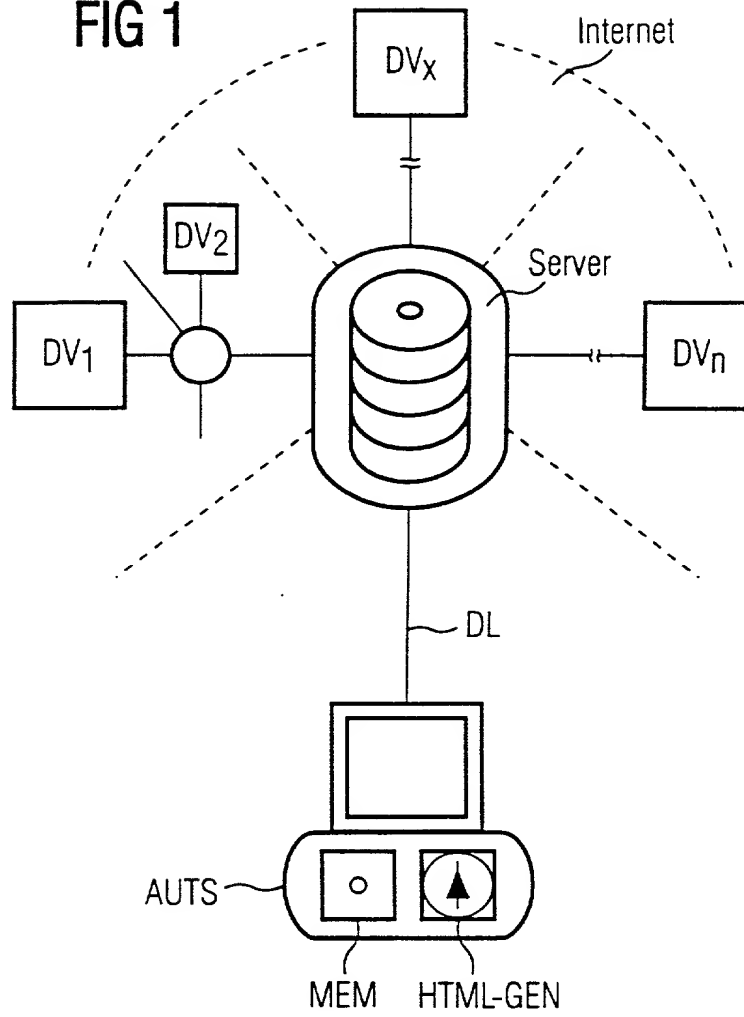


FIG 2

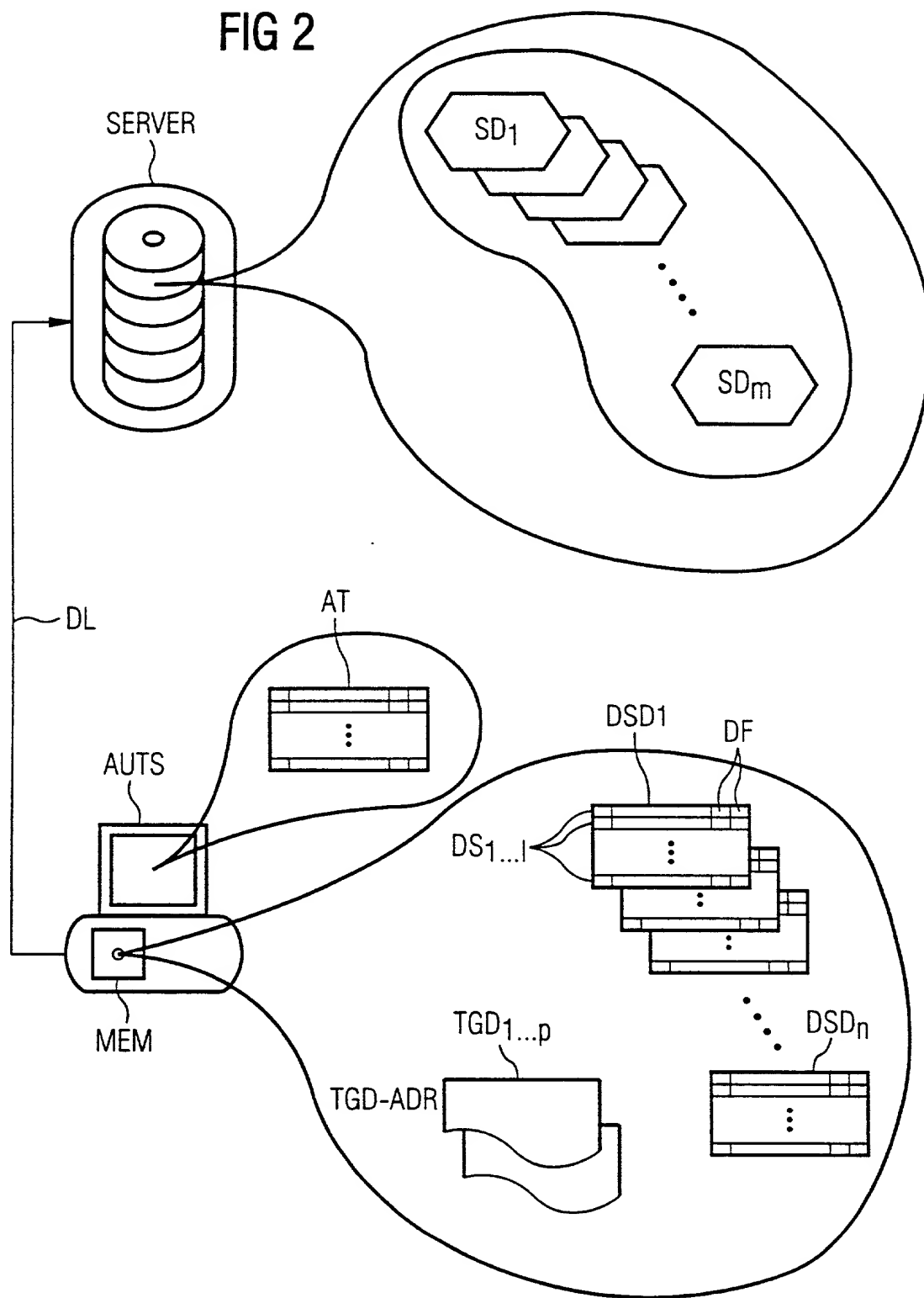
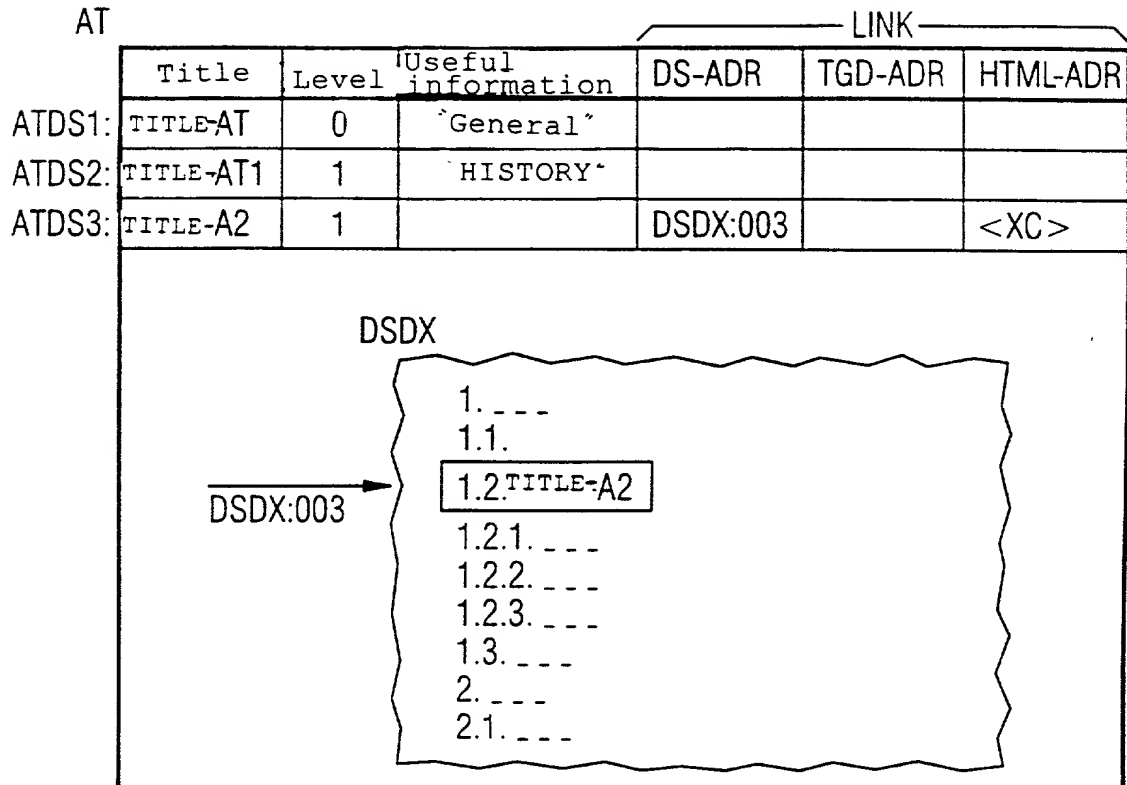
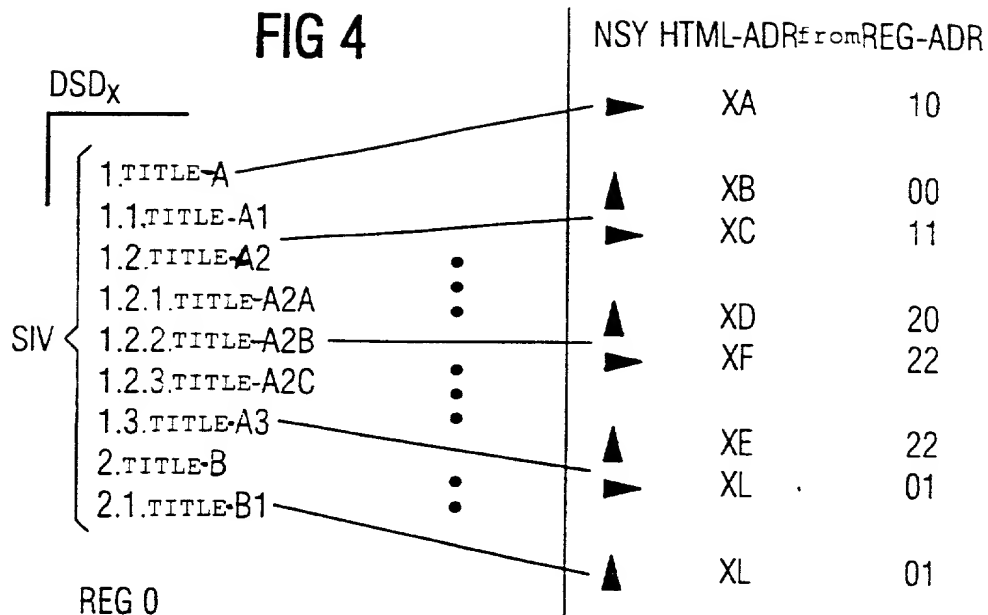


FIG 3



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FIG 4



	TITLE	INDEX	DS-ADR	HTML-ADR	log. next REG-ADR	log. Prev. REG-ADR
00:	TITLE-A	1.	< >	<XB>	10	—
01:	TITLE-B	2.	< >	<XL>	13	12

10:	TITLE-A1	1.1.	< >	<XA>	11	00
11:	TITLE-A2	1.2.	< >	<XC>	20	10
12:	TITLE-A3	1.3.	< >	< >	01	22
13:	TITLE-B1	2.1.	< >	< >	—	01

20:	TITLE-A2A	1.2.1.	< >	<XD>	21	11
21:	TITLE-A2B	1.2.2.	< >	<XF>	22	20
22:	TITLE-A2C	1.2.3.	< >	<XE>	12	21

Declaration and Power of Attorney For Patent Application

Erklärung Für Patentanmeldungen Mit Vollmacht

German Language Declaration

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides Statt:

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dass ich, nach bestem Wissen der ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein Name angegeben ist) oder ein ursprünglicher, erster und Miterfinder (falls nachstehend mehrere Namen aufgeführt sind) des Gegenstandes bin, für den dieser Antrag gestellt wird und für den ein Patent beantragt wird für die Erfindung mit dem Titel:

Verfahren zur Generierung eines Verbundes
von in einer Seitenauszeichnungssprache
formatierten Seitendateien

deren Beschreibung

(zutreffendes ankreuzen)

☒ hier beigefügt ist.

☐ am _____ als

PCT internationale Anmeldung

PCT Anmeldungsnummer _____

eingereicht wurde und am _____

abgeändert wurde (falls tatsächlich abgeändert).

Ich bestätige hiermit, dass ich den Inhalt der obigen Patentanmeldung einschliesslich der Ansprüche durchgesehen und verstanden habe, die eventuell durch einen Zusatzantrag wie oben erwähnt abgeändert wurde.

Ich erkenne meine Pflicht zur Offenbarung irgendwelcher Informationen, die für die Prüfung der vorliegenden Anmeldung in Einklang mit Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) von Wichtigkeit sind, an.

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäss Abschnitt 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 119 aller unten angegebenen Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde, und habe auch alle Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde nachstehend gekennzeichnet, die ein Anmeldedatum haben, das vor dem Anmeldedatum der Anmeldung liegt, für die Priorität beansprucht wird.

As a below named inventor, I hereby declare that.

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

the specification of which

(check one)

☐ is attached hereto.

☐ was filed on _____ as

PCT international application

PCT Application No. _____

and was amended on _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

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German Language Declaration

Prior foreign applications
Priorität beansprucht

Priority Claimed

197 05 526.5 Germany 13. Februar 1997
(Number) (Country) (Day Month Year Filed)
(Nummer) (Land) (Tag Monat Jahr eingereicht)

☒ ☐
Yes No
Ja Nein

(Number) (Country) (Day Month Year Filed)
(Nummer) (Land) (Tag Monat Jahr eingereicht)

☐ ☐
Yes No
Ja Nein

(Number) (Country) (Day Month Year Filed)
(Nummer) (Land) (Tag Monat Jahr eingereicht)

☐ ☐
Yes No
Ja Nein

Ich beanspruche hiermit gemäss Absatz 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 120, den Vorzug aller unten aufgeführten Anmeldungen und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in einer früheren amerikanischen Patentanmeldung laut dem ersten Paragraphen des Absatzes 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 122 offenbart ist, erkenne ich gemäss Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung und dem nationalen oder PCT internationalen Anmeldedatum dieser Anmeldung bekannt geworden sind.

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §122, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.)
(Anmeldeseriennummer)

(Filing Date)
(Anmeldedatum)

(Status)
(patentiert, anhängig,
aufgegeben)

(Status)
(patented, pending,
abandoned)

(Application Serial No.)
(Anmeldeseriennummer)

(Filing Date)
(Anmeldedatum)

(Status)
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POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

And I hereby appoint

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Bundesrepublik Deutschland			
Voller Name des zweiten Miterfinders (falls zutreffend):		Full name of second joint inventor, if any:	
Unterschrift des Erfinders	Datum	Second inventor's signature	Date
Wohnsitz		Residence	
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(Bitte entsprechende Informationen und Unterschriften im Falle von dritten und weiteren Miterfindern angeben).

(Supply similar information and signature for third and subsequent joint inventors).